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Exploring Neutrino Masses and Mixing in the Seesaw Model with $L_e - L_\tau$ Gauged Symmetry

Friday 1 October 2021 10:50 (2 hours)

In the poster, we have taken $L_e - L_\tau$ gauge symmetry to study neutrino phenomenology in the framework of type-(I+II) seesaw mechanism. In the model, three heavy right-handed neutrinos, a scalar singlet, and one scalar triplet are added to the Standard Model. As a result, the active neutrino-mass matrix has a two-zero A_1 texture which helps explain neutrino oscillation parameters like $\theta_{13}, \theta_{23}.\theta_{12}$, the sum of active neutrino masses etc. The model also explains neutrinoless double β decay and lepton flavor violation with reasonable accuracy. The branching ratio of $\tau \to e\gamma$ and $\tau \to \mu\bar{\mu}\mu$ also stay well below the experimental upper bound.

What is your topic?

Neutrino Physics

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